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NGO Networks for Health

Mother To Child Transmission

At a glance

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Mother-to-child transmission (MTCT) of HIV is an urgent and growing problem. Each year, more than 600,000 infants are infected with HIV/AIDS—at a rate of one infant every minute of every day, the majority in developing countries through their HIV-infected mothers. As the number of women of childbearing age who are infected by HIV rises, so also does the number of infected children, contributing to severe child morbidity and significant child mortality. By the year 2010, HIV/AIDS is likely to increase the mortality of children under age 5 by more than 100 percent in those regions most affected by the virus.[1]

This issue of *At A Glance* reviews the latest thinking on the topic and summarizes key strategies to prevent MTCT of HIV.

Transmission

- HIV is transmitted from mother to child at three times: during pregnancy, labor and delivery, and after birth, usually through breastfeeding. The risk of MTCT in HIV-infected women during pregnancy is estimated at 5–10 percent, during labor and delivery at 10–20 percent, and during breastfeeding at 10–20 percent.[2]

If no preventive measures are taken, the risk of MTCT in HIV-infected women is estimated at nearly 35 percent.

The risk of MTCT increases if a woman becomes infected or re-infected with HIV during pregnancy, or if she becomes ill with AIDS, because of higher viral loads. Other factors that increase the opportunity for transmission during this period include viral, bacterial, or parasitic placental infection.

Most infants who acquire HIV during delivery do so through exposure to maternal blood or cervical secretions that contain HIV. Prolonged membrane rupture and invasive delivery techniques have also been associated with higher risks of MTCT during labor and delivery.

The danger of MTCT is greater when HIV-positive women do not exclusively breastfeed for the first six months, or if complications develop from poor breastfeeding techniques (e.g., mastitis, cracked and bloody nipples). The risk of MTCT also increases if the mother becomes infected with HIV while breastfeeding.

Gender and HIV/AIDS

Women, particularly young women, are biologically, socio-culturally, and economically at greater risk of HIV infection than men. Women also risk discrimination if they are infected—they may be physically abused or chased out of their homes, or have their property taken by their husband's relatives after his death. They are less likely to receive home care and more likely to have to continue with heavy workloads when ill with AIDS-related conditions.

Strategies for Reducing the Risk of Mother-to-Child Transmission

Preventing MTCT is critical to saving children's lives and has broad-reaching impact on improving overall maternal and child health through improved antenatal, delivery, and postpartum care. The key intervention strategies addressed here include:

- Primary prevention
- Preventing unwanted pregnancy
- Reducing risk during pregnancy
- Reducing risk during labor and delivery
- Promoting optimal breastfeeding

Primary MTCT Prevention

Decreasing the vulnerability of girls and women to HIV infection is the best way to prevent MTCT. Prevention begins with education, which includes increasing knowledge among adolescents, women, and men about HIV/AIDS, its transmission, and prevention, helping girls and women to gain skills in negotiating safer sex, and providing information about sexual health and the prevention of infections and unwanted pregnancy. MTCT prevention education at the community level is important to reduce stigma and create an environment that is supportive of women who face difficult decisions related to MTCT.

Preventing Unwanted Pregnancy

Barrier methods of contraception are essential to preventing HIV and other sexually transmitted infections and should be promoted by family planning services for infection prevention to clients seeking contraception. Pregnant and breastfeeding women should be counseled to use condoms to prevent primary HIV infection or re-infection, which increases viral load and the risk of MTCT. Preventing unwanted pregnancy in HIV-infected women is also an important strategy to guard against MTCT.

Voluntary and Confidential Counseling and Testing

Voluntary and Confidential Counseling and Testing (VCCT) is strongly recommended during pregnancy. If a woman is HIV-free, she can be counseled in appropriate prevention strategies. If a woman is HIV-positive, knowing her status facilitates early counseling and treatment to reduce the risk of MTCT during pregnancy, labor and delivery, and the postpartum period. Measures to ensure privacy and follow-up support are essential components of VCCT services.

With the addition of VCCT, counseling on infant feeding, and anti-retroviral drug therapies, the package of antenatal services that will help to reduce MTCT is almost identical to the package that safe motherhood activists have been advocating for years. With her consent, a woman's partner and family should be involved throughout the pregnancy and postpartum period to ensure sharing and support in decision-making.

Reducing Risk of MTCT During Pregnancy

Quality antenatal health care including voluntary and confidential counseling and testing (VCCT) can help reduce the risk of MTCT in HIV-infected women. Treating STIs and other infections such as malaria and tuberculosis and providing advice on prevention of infection and re-infection will reduce the risk of MTCT. For every pregnant woman, good antenatal health services can improve overall health and nutrition, improve birth outcomes, reduce maternal mortality, and reduce women's risk of HIV infection. Given that in many settings, pregnant women are of unknown HIV status and most will not have any symptoms of HIV infection, providing essential antenatal care to all women will help to ensure that HIV-positive women receive optimum care.

Reducing Risk of MTCT During Labor and Delivery

In labor and delivery, most HIV-infected women will be asymptomatic. Therefore, quality supportive services should be available to all women to minimize MTCT.

- Support the mother by talking and listening to her; encourage her to walk around, feed her, and encourage her to drink to prevent dehydration. Mothers who have a friend or relative with them in labor are more likely to have a normal delivery.
- Minimize invasive procedures by avoiding artificial rupture of membranes and routine episiotomy; minimize the use of forceps and vacuum-assisted delivery.
- Treat any signs of infection.
- Manage postpartum hemorrhage and ensure safe blood transfusions.
- Minimize aggressive suctioning of the infant's mouth.
- Clamp the umbilical cord after it has ceased pulsing before cutting to avoid spraying possibly infected blood.
- Initiate early breastfeeding.
- Provide short-course anti-retroviral drug therapy if available and acceptable.

> Infant health is closely linked to maternal health. The prevention of HIV in an infant without treatment for the mother is neither ethical nor sustainable.[3]

While cesarean sections may reduce the risk of MTCT during delivery, the high cost and lack of surgical facilities in most developing countries, as well as the increased risks of infection, hemorrhage, and other complications preclude them as an effective strategy for MTCT prevention.

Antenatal Services to Reduce MTCT

- Voluntary and confidential counseling and testing for HIV
- Education on nutrition and provision of nutritional supplements
- Screening for sexually transmitted infections
- Care for other infections (e.g., tuberculosis, parasites, herpes)
- Malaria prophylaxis and treatment
- Education about safer sex
- Planning for safe delivery, including emergency transport
- Counseling on infant feeding
- Counseling on postpartum family planning
- Anti-retroviral drug therapy, if available and acceptable

Encouraging Optimal Breastfeeding

Breastfeeding is one of the best ways to ensure the health of babies in resource-poor environments. Infants who are not breastfed are almost six times as likely as breastfed infants to die in the first two months of life.[4] WHO, UNICEF, and UNAIDS have affirmed that breastfeeding remains the best and safest choice for women who are HIV-free or who do not know their HIV status.[5] If a woman knows that she is HIV-positive but has limited access to safe water, adequate sanitation, health care, and affordable infant formula, breastfeeding provides the best chances of infant survival.[6] There are also considerations of the stigma a woman may face with her family and community if she does not breastfeed her infant. If an HIV-positive mother chooses to breastfeed, she should do so exclusively for about the first six months.[7]

To reduce the risk of MTCT, mothers should be counseled to:

- Initiate breastfeeding soon after delivery.
- Practice good breastfeeding techniques.
- Exclusively breastfeed their babies for the first six months.

Breastfeeding has the added benefit of helping a woman to limit her fertility by extending the period of postpartum amenorrhea.

For further reading

Linkages Project. May 2001. *Breastfeeding and HIV: Frequently Asked Questions*.

Preble, Elizabeth and Ellen Piwoz. 2001. *Prevention of Mother-to-Child Transmission of HIV in Africa: Practical Guidance for Programs*. SARA Project, Academy for Educational Development.

Websites:

LINKAGES Project: **www.linkagesproject.org**

UNICEF Programme on the Prevention of Mother-to-Child Transmission of HIV: **www.unicef.org**

Joint United Nations Programme on HIV/AIDS (UNAIDS): **www.unaids.org**

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NGO Networks for Health

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At a glance

NGO Networks for Health (*Networks*) is an innovative five year global health partnership created to meet the burgeoning demand for quality family planning, reproductive health, child survival, and HIV/AIDS information and services around the world. Funded by the United States Agency for International Development (USAID), the project began operations in June 1998. For more information, contact:

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Networks Technical Support Group encourages and supports health policy makers, program managers, and service providers to:

- become aware of the need to consider related social issues in all aspects of their work;
- understand that individual's perceptions can affect policy making, program planning, and clinical practice; and
- become comfortable in discussing a wide range of issues with colleagues, clients, and other persons at community levels as appropriate in their work.

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